

CLAIMS

We Claim:

- 5 1. A vehicle combined back-up and battery low-level alarm comprising:
 - a back-up alarm circuit;
 - a voltage sensing and comparing circuit;
 - a timing circuit; and
 - a gating circuit;
- 10 wherein the gating circuit performs tone generation output in response to inputs from the back-up alarm circuit, voltage sensing and comparing circuit, and the timing circuit.
- 15 2. The combined alarm of Claim 1, wherein the gating circuit comprises a microcontroller.
- 20 3. The combined alarm of Claim 2, wherein the microcontroller incorporates an analog to digital converter.
- 25 4. The combined alarm of Claim 1, which also comprises a signaling lamp.
5. The combined alarm of Claim 4, which also comprises an ambient light sensor.
- 30 6. The combined alarm of Claim 1, which is incorporated within a single housing.

7. The combined alarm of Claim 1, wherein the voltage sensing and comparing circuit is responsive to two different voltage thresholds.

5 8. The combined alarm of Claim 7, wherein there is different alarm mode timing for each respective voltage threshold.

9. The combined alarm of Claim 1, wherein the back-up alarm circuit has alarm mode
10 precedence over the voltage sensing and comparing circuit.

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